

REMARKS

Claims 1-14 are pending in the application and have been rejected. Reconsideration and allowance of Claims 1-14 in view of the above amendments and following remarks is respectfully requested.

Objection to the Abstract

The Examiner has objected to the abstract for containing insufficient description of the invention and has required correction. Applicants have amended the abstract. Withdrawal of the objection is respectfully requested.

The Rejection of Claims 1-3, 5-8, and 10-14 Under 35 U.S.C. § 103(a)

Claims 1-3, 5-8, and 10-14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,572,919, issued to Westland et al., in view of U.S. Patent Application Publication No. US2003/0208859 by Neogi et al., and further in view of U.S. Patent No. 5,571,604, issued to Sprang et al. Withdrawal of the rejection is requested for the following reasons.

The claimed invention relates to whitened crosslinked cellulosic fibers, comprising cellulosic fibers treated with a crosslinking agent and a whitening agent comprising one or more dyes. See independent Claims 1, 6, and 12.

The Examiner states that the Westland et al. reference describes a process for making crosslinked fibers that includes applying a crosslinking agent and catalyst to a web of fibers, separating the web into individualized fibers, and heating the individualized fibers to provide individualized crosslinked fibers. The Examiner states that the Westland et al. reference does not disclose the use of a whitening agent in the preparation of the crosslinked fibers.

The Examiner relies on the Neogi et al. reference for the teaching of the addition of colorant (e.g., blue dye) to whiten fluff pulp. The Examiner states that the Sprang et al. reference

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CHRISTENSEN O'CONNOR JOHNSON KINDNESS^{LLC}
1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100

describes that chemical additives, such as dyes and pigments, can be added to a fibrous web. The Examiner concludes that it would have been obvious to modify the process described in the Westland et al. reference by adding a blue dye, as described in the Neogi et al. reference, to the formed web, as described in the Sprang et al. reference, to increase whiteness of the product to make the product more preferable to customers.

Applicants respectfully submit that the Neogi et al. reference is not citable as a reference against the present application.

The Neogi et al. reference has a publication date of November 13, 2003. The present application was filed March 31, 2004, less than one year after the publication of the Neogi et al. reference. Therefore, the Neogi et al. reference is a § 102(e) reference with respect to the present application. Like the pending application, the Neogi et al. reference is assigned to Weyerhaeuser Company. Pursuant to 35 U.S.C. § 103(c)(1), subject matter developed by another person, which qualifies as prior art only under one or more of subsections (e), (f), and (g) of Section 102, shall not preclude patentability under Section 103 where the subject matter and the claimed invention was, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. Because the Neogi et al. reference is a § 102(e) reference (invention by another) and was assigned to Weyerhaeuser Company at the time the present invention was made, and because the present application is also assigned to Weyerhaeuser Company, pursuant to 35 U.S.C. § 103(c)(1), the Neogi et al. reference is not available as prior art citable against the present application.

Applicants submit that without the Neogi et al. reference, there is no motivation to combine the colorant described in the Sprang et al. reference with the crosslinking process described in the Westland et al. reference. The Westland et al. reference fails to suggest or provide any motivation to further color fibers produced by that method to improve their

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CHRISTENSEN O'CONNOR JOHNSON KINDNESS^{MLC}
1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100

brightness. Furthermore, the Sprang et al. reference merely notes that fibrous webs can be subject to chemical post-treatment and that a variety of chemicals (e.g., dyes and pigments, among others) can be used to impart or enhance desirable properties. The Sprang et al. reference provides no suggestion or motivation to color crosslinked fibers.

Because the Neogi et al. reference is unavailable as a prior art reference, and because the Westland et al. and Sprang et al. references fail to teach, suggest, or provide any motivation to make the claimed whitened crosslinked cellulosic fibers, the claimed invention is nonobvious and patentable over the Westland et al. and Sprang et al. references. Withdrawal of this rejection is respectfully requested.

The Rejection of Claims 4 and 9 Under 35 U.S.C. § 103(a)

Claims 4 and 9 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Westland et al., Neogi et al., and Sprang et al., as applied to Claims 1-3 and 5-8 above, and further in view of U.S. Patent No. 5,512,064, issued to von der Eltz. Withdrawal of the rejection is requested for the following reasons.

Claim 4 depends from Claim 1, and Claim 9 depends from Claim 6. Claims 1 and 6 have been addressed above.

The Neogi et al. reference is not available as prior art. The deficiencies of the teachings of the Westland et al. and Sprang et al. references noted above are not cured by the teaching of the von der Eltz reference.

The von der Eltz reference relates to azo dyes and azo metal complex dyes. More specifically, the von der Eltz reference describes a process for dyeing fiber materials (i.e., textiles and fabrics). The process seeks to enhance the substantivity of the dyes (i.e., improve dye fixation to the material and to improve the fastness properties of the dyeing). The reference addresses the problem associated with traditional dyeing processes that require strongly alkaline

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CHRISTENSEN O'CONNOR JOHNSON KINDNESS^{PLC}
1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100

conditions to effect dye fixation to a fiber material. At Column 1, lines 23-30, the references states:

[a] dyeing process which can be carried out with little or no salt and at the same time little or no alkaline agent is advantageous particularly with regard to the dyeing process using fiber-reactive dyes because the fixation of the fiber-reactive dye in aqueous, frequently strong alkaline, dyeing liquor may be accompanied by hydrolysis reactions on the fiber-reactive dye, which is why fixation on the fiber material is not complete.

In addition to reducing the fixation of dyes to fiber materials, the use of strongly alkaline dyeing conditions causes further problems. At Column 1, lines 30-37, the reference states:

For this reason the dyeing process has to be followed by, in some instances, extensive and time-intensive washing and rinsing processes, such as repeated rinsing with cold and hot water and in-between neutralization treatment to remove excess alkali from the dyed materials and further, for example, by a boil wash with a nonionic detergent in order that the good fastness properties of the dyeing may be ensured.

The reference solves the problems associated with fiber material alkaline dyeing noted above. At Column 2, lines 1-9, the reference describes the solution:

The present invention now provides that anionic textile dyes, in particular those having fiber-reactive groups, will surprisingly give level and strong dyeings having good service fastness properties without or only minimal use of alkaline agents and electrolyte salts provided that the textile material used is a fiber material which has been modified by pretreatment with a polymeric compound which contains at least one secondary or primary amino group and has been crosslinked on the fiber by a suitable bifunctional compound.

The von der Eltz reference, either alone or in combination with the other cited references, fails to teach or suggest the claimed invention.

As an initial matter, unlike the claimed invention which is directed to whitened crosslinked fibers, the reference relates to enhancing the substantivity of dyes in dyeing processes. The reference exemplifies dyed textiles and fabrics that are highly colored and have good fastness properties: Example 1, orange; Example 2, orange; Example 3, yellow; Example

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1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100

5, strong uniform turquoise; Example 6, scarlet; Example 7, brilliant blue; Example 8, strong blue; Example 9, turquoise; Example 10, strong deep red; Example 11, strong level red; Example 12, yellow. One skilled in the art would not be motivated to combine the teaching of the von der Eltz reference directed to coloring fiber materials with any reference directed to whitening fiber materials.

Furthermore, the reference is directed to enhancing dye substantivity and teaches away from methods employing alkaline conditions. There exists no motivation to combine the teachings of the von der Eltz reference with any reference employing strong alkaline conditions (e.g., the strongly alkaline oxidizing conditions described in the Cook reference) because the von der Eltz reference teaches away from the use of alkaline conditions for treating fiber materials because of the problems associated with diminished fixation and fastness noted above.

Also, in contrast to the claimed invention directed to whitened crosslinked fibers, the von der Eltz reference does not relate to crosslinked fibers at all, but rather to a fiber material that has been treated with a crosslinked polymer: "a polymeric compound [polyethyleneimine] which contains at least one secondary or primary amino group and has been crosslinked on the fiber by a suitable bifunctional compound [glyoxal] and thereby [the polymeric compound] rendered water-insoluble." See Column 2, lines 7-9 and Example 1-12. The water-insoluble, crosslinked polymer provides the surface on the fiber material to which the anionic dye is fixed.

Finally, with particular regard to independent product-by-process Claim 1 and independent process Claim 6, applicants note that the von der Eltz reference is directed to dyeing fiber materials that are textiles and in no way teaches or suggests any process that includes the steps recited in Claims 1 or 6. Specifically, Claims 1 and 6 recites separating a web of fibers treated with a whitening agent and crosslinking agent into individualized fibers and then curing

those fibers to provide individualized whitened crosslinked fibers. The von der Eltz reference is directed to dyeing textiles and fabrics (see Examples 1-12), not individualized fibers.

Because the Neogi et al. reference is unavailable as a prior art reference, and because the Westland et al., Sprang et al., and von der Eltz references, either alone or in any combination, fail to teach, suggest, or provide any motivation to make whitened, crosslinked cellulosic fibers, the claimed invention is nonobvious and patentable over the cited references. Withdrawal of the rejection is respectfully requested.

The Provisional Obviousness-Type Double Patenting Rejection

Claims 1-14 have been provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1, 3-6, 9-14, and 17-19 of copending application No. 10/813,957.

Applicants note the provisional double patenting rejection and will file a terminal disclaimer on the Examiner's indication of allowable subject matter.

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CHRISTENSEN O'CONNOR JOHNSON KINDNESS^{PLLC}
1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100

CONCLUSION

In view of the above amendments and foregoing remarks, applicants believe that Claims 1-14 are in condition for allowance. If any issues remain that may be expeditiously addressed in a telephone interview, the Examiner is encouraged to telephone applicants' attorney at 206.695.1755.

Respectfully submitted,

CHRISTENSEN O'CONNOR
JOHNSON KINDNESS^{PLLC}

George E. Renzoni

George E. Renzoni, Ph.D.
Registration No. 37,919
Direct Dial No. 206.695.1755

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Date: November 9, 2005

GER:jeh

LAW OFFICES OF
CHRISTENSEN O'CONNOR JOHNSON KINDNESS^{PLLC}
1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100